PIMA ROAD REALIGNMENT STUDY – DRAFT NEWSLETTER
COS PROJECT NO. 2003-114-COS - ENTELLUS PROJECT NO. 410.061

INTRODUCTION

This newsletter is written to update you on the Pima Road Realignment project and upcoming plans.

Purpose of Realignment
- Safety Improvements
- Increase Capacity

Type of Improvements
- Street Widening
- Drainage Improvements
- Scenic Features

Background

The realignment of Pima Road was first identified in Scottsdale's Foothills General Plan, and adopted by the City Council in December of 1984. Accommodating the realignment was a stipulation of the 1987 Ironwood Village rezoning approval. The developer dedicated right-of-way for the roadway, scenic corridor, and vista washes. In addition, the developer constructed the roadway, currently known as "Little Pima," adjacent to the subdivision.

On June 12, 2000, a Council Study Session was held to review the proposed alignment of Pima Road. At this study session, three alternative alignments were presented by the City's Transportation Department (Alt. A, B, & C). The positives and negatives of each alternative were discussed. During this meeting, the Council and Transportation Department developed three additional alternatives to be further studied (Alt. D, E, & F). All six alternatives are illustrated below.

Alternative A

Alternative B

Alternative C

Alternative D **Alternative E** **Alternative F**

Since the Study Session, these alternatives have been further evaluated. Basic evaluation considerations that were used to screen these alternatives included: ***safety, land acquisition, and conformance with City Design Standards***. Alternative B was eliminated because it did meet design standards or safety requirements. Alternatives D, E, and F required excessive land acquisition due to splitting existing parcels. Discussions with representatives of the landowners, indicated an unwillingness to sell property.

Out of the possible six solutions, Alternatives A and C met the basic evaluation criteria and were selected to be researched more. These two alternatives are better known as the general plan alignment and 65' offset, respectively.

FURTHER COMPARISON OF ALTERNATIVES A AND C

In order to make a more in depth comparison of these two alternatives, they were evaluated and refined using Quality of Life criteria as expressed by the local community. The major Quality of Life criteria include: ***noise, traffic circulation, and landscaping/aesthetics.***

In addition, the major screening criteria listed above were also revisited briefly. The factors of safety, land acquisition, and conformance with City Design Standards and the overall cost were considered. These factors were used to develop an overall opinion as to whether the alternative could be considered as feasible and one that could be given the full support of City staff as well as the local community.

The results of the more detailed evaluation of the differences between these two alignments are discussed later in this newsletter. They will be evaluated only in the area between Union Hills and Hualapai since these alignments are basically the same outside these limits.

Noise

There are three components, which contribute to traffic noise: number of vehicles, speed of vehicles, and type of vehicles. The two ways to mitigate noise are increase distance from source or to provide a barrier between the source and receiver.

The decibel (dB) is the unit of measure for sound. The following table provides some common noise levels, which provides a guide to compare the existing and anticipated noise levels at Ironwood Village.

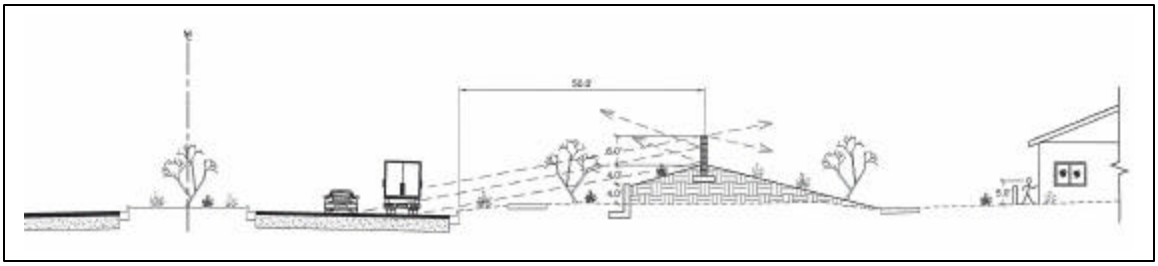
Common Indoor and Outdoor Noise Levels

Common Outdoor Noise Level	*Noise Level (dBA)*	*Common Indoor Noise Level*
	110	Rock Band
Jet Flyover at 350 m		
	100	
Gas Lawn Mower at 1 m		
		Food Blender at 1 m
Diesel Truck at 15 m	90	
Noisy Urban Daytime	80	Garbage Disposal at 1 m
		Shouting at 1 m
Gas Lawn Mower at 30 m	70	Vacuum Cleaner at 3 m
Commercial Area		Normal Speech at 1 m
	60	
		Large Business Office
Quiet Urban Daytime	50	Dishwasher Next Door
Quiet Urban Nighttime		Small Theater, Large Conference
	40	Room (background)
Quiet Suburban Nighttime		
	30	Library
Quiet Rural Nighttime		
	20	
		Concert Hall (background)
	10	Broadcast & Recording Studio
		Threshold of Hearing
	0	

Source: AASHTO Guide on Evaluation and Abatement of Traffic Noise, 1993

A Noise Study determined existing noise on the west side of Ironwood Village ranged between 58 to 60 dB. The general plan alignment was modeled and noise levels would increase to 68 to 73 dB. The 65 foot offset has little benefit in lowering the noise levels. The noise model indicates that noise levels would drop less than 1 dB compared to the general plan alignment. The Arizona Department of Transportation requires mitigation to take noise levels to 63 dB, so bother alternatives will require a noise abatement structure.

The location of the noise mitigation structure has a bearing on its effectiveness. The best location for the noise mitigation structure is at the source or at the receptor.



Three options were identified for noise abatement:

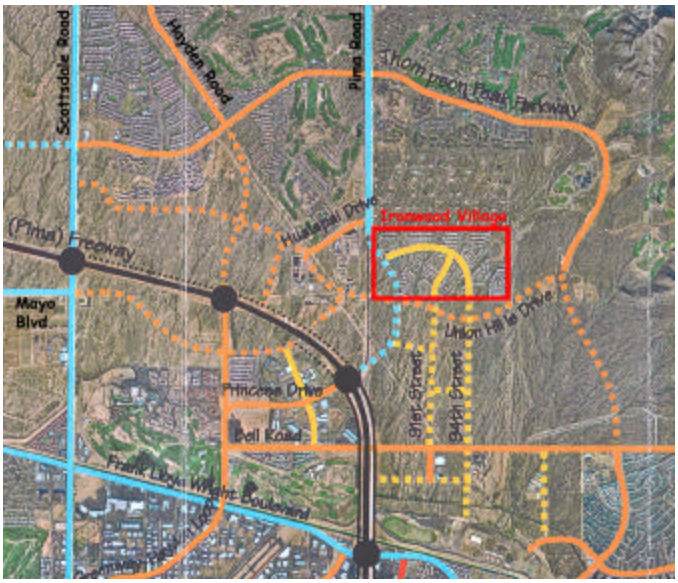
1. A noise wall near the edge of pavement
2. A noise wall at the property line.
3. A noise wall between the property line and proposed roadway.

Option 1 does not meet the scenic corridor requirements. Based on meetings with the Ironwood Village Board of Directors in the height at the west edge of Ironwood Village was not desirable. Therefore Option 2 was also eliminated. Option 3 was the only viable alternative.

Rubberized asphalt will also be used in this area, which typically lowers the noise by about 4 dB. It will not be incorporated into the model so actual noise levels will be closer to 59 dB, which is similar to existing conditions.

Traffic Circulation

One of the most important quality of life issues to Ironwood Village Residents is how they will be able to get into and out of the neighborhood.



Currently, the existing traffic exceeds the capacity of Pima Road. As the North Scottsdale area continues to grow, traffic congestion will continue to increase. Fortunately, the City has identified additional roadway corridors to alleviate congestion.

This will help to temper the amount of vehicles utilizing Pima Road. However, the capacity of Pima Road will still need to be increased. These capacity improvements include increasing the number of travel lanes to three in each direction between the Loop 101 and Thompson Peak Parkway and softening the curve north of the Loop 101 interchange. Current traffic planning requires

new traffic signals to be installed at the future Union Hills intersection and at Hualapai. The traffic signal at Downing Olson will be eliminated. Minimizing the number of signals will allow traffic to flow more easily.

Access to the freeway can be from three locations, Pima Road, Scottsdale Road via Thompson Peak Parkway, or at Hayden via Union Hills/Center Parkway Also, 92nd and 94th Streets when constructed will provide a connection to Bell Road and onto Loop 101. These roads will provide the Ironwood Village residents options and even the increasing north Scottsdale traffic flow to local destinations.

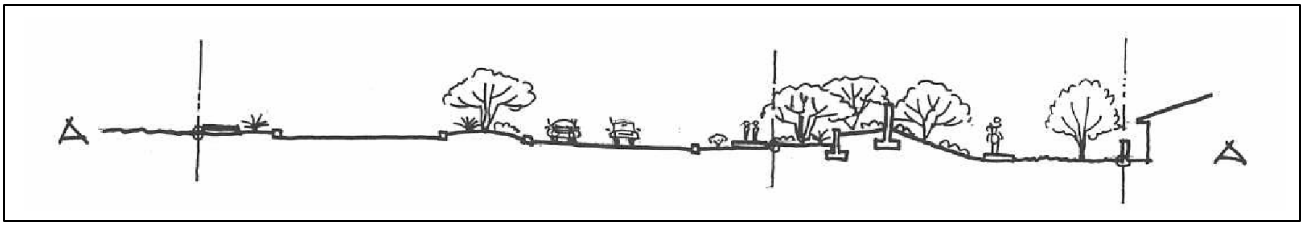
The speed limit on Pima Road was discussed with Ironwood Village Board and Pima Road committee members. The previous posted speed was 55 mph and is currently 50 mph. North of Pinnacle Peak, the posted speed limit is 55 mph. The design speed for the new alignment will be 65 mph, but the posted speed will probably be 45 mph.

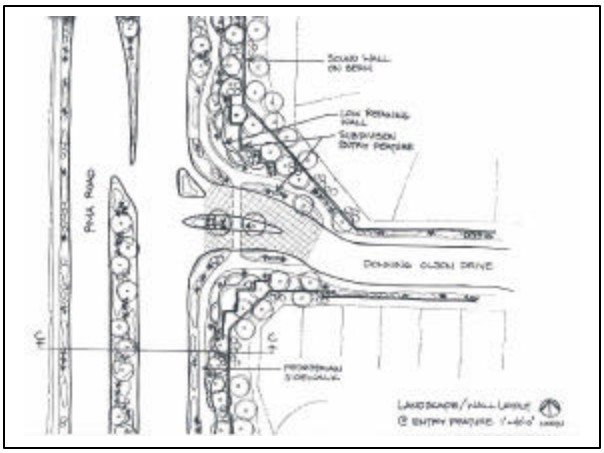
Landscaping

Site Improvements/Features:

The site improvements next to Ironwood Village must buffer the community from noise generated by Pima Road vehicular traffic. As discussed earlier, a combination berm and sound barrier is the best solution to achieve both visual and noise buffering for Ironwood Village residents. The typical cross section for this portion of the roadway includes a wall/berm combination ranging from 12' to 14' above the road surface. The short retaining wall (<3') on the street side will reduce the visible height of the sound barrier.

An equestrian trail and Ironwood Village walking path is planned on the east side of the berm/wall.

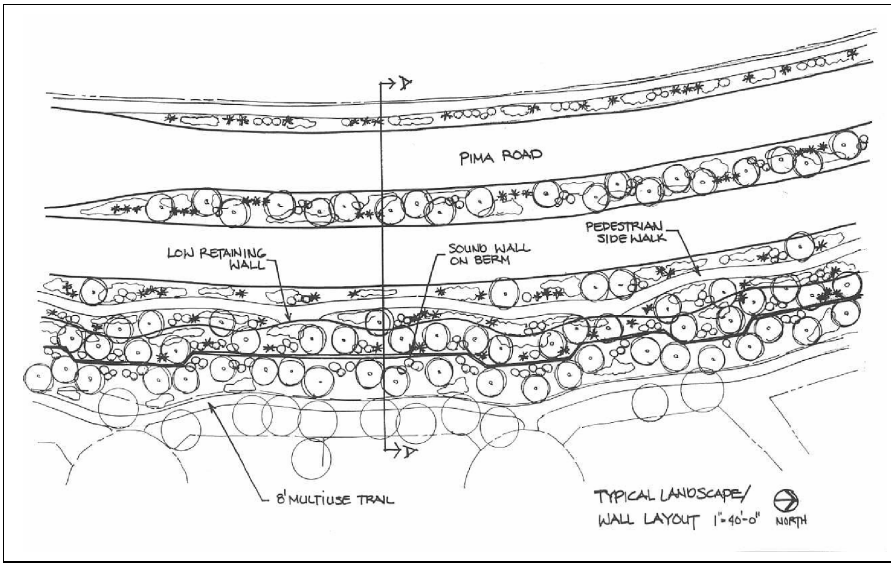




At the Downing Olson Drive entry, the berm/sound barrier will wrap around residences closest to Pima Road as required in the noise study to protect these homes from noise impacts.

The streetscape retaining wall is intended to serve as the visual focus for roadway travelers along Pima Road. The wall will be treated primarily with a natural or faux stone veneer and may have minor sections of stucco and/or masonry to match commonly used patterns at other residential communities in the northern portion of Scottsdale. The retaining wall will have a curvy, sinuous alignment. The sound barrier will have a more angular alignment; long wall segments will act as chord lengths to allow the wall to maintain a generally consistent off-set from the roadway and to further create visual interest along the route. The aesthetics of the sound barrier will be less articulated - stucco will be the primary surface finish. A judicious use of aesthetic enhancing materials (i.e., natural stone or masonry, etc.) will be added to the sound barrier where needed to improve its appearance. The community side retaining wall will compliment the sound barrier character. It is intended that the wall patterns and colors will replicate natural desert tones (i.e., ivy, beige, tan, light brown, etc.).

Sonoran Parkway Landscape Concept:



The landscaping concept for Pima Road uses native desert plants mixed with a few naturalized plant species to create a Sonoran Parkway character. The planting palette for the median and peripheral landscape areas will consist of native plants such as saguaro, barrel cactus, cholla, agave, palo verde, ironwood, mesquite, creosote, brittle bush, bursage, calliandra, desert marigold, and ocotillo placed in naturally-appearing groupings. At selected locations such as the Downing

Olson entrance to Ironwood Village and at the northeast corner of Pima Road and Union Hills Drive, drought-tolerant species such as texas rangers, margarita daisies and flowering lantana will be introduced to augment the native materials and to enhance the aesthetics of those locations. At the Downing Olson entrance, colorful low growing vegetation will be planted to emphasize the interplay of the curved site walls and to highlight the gateway feature shown in the Ironwood Village Master Plan (July 2003). Along the majority of the Ironwood Village frontage, trees, saguaros, ocotillo and shrubs will dominate the landscape area between the retaining walls and the sound barrier.

The Pima Road median is wide enough to allow the placement of trees. Naturally appearing groupings will be placed to compliment the landscaping patterns developed for the peripheral (back of curb) locations. Landscape treatments in the area along the Ironwood Village corridor will be coordinated with Ironwood Village's landscape architect to ensure aesthetic cohesion with existing landscaping.

COORDINATION

Both alternatives were discussed with the project stakeholders at a series of meetings. These stakeholders included:

- Ironwood Village HOA Board of Directors
- Ironwood village Pima Road Committee members
- DC Ranch representatives
- Arizona State Land representatives
- Private Land Owners
- City of Scottsdale

Presently, the right-of-way for the General Plan alignment is owned by the City. This right-of-way was both purchased and dedicated. Private land owners to the west of Pima Road between Union Hills and Hualapai were strongly against shifting the road to the 65 foot offset alignment.

Based on the noise analysis, there was little to no benefit in shifting the road to the west in terms of noise abatement. Ironwood Village residents indicated that they had additional concerns. Of particular importance, the ultimate location of Union Hills. Currently, the right-of-way for Union Hills is established, and the north side of the right-of-way is pushed up to Ironwood village and provides little to no buffer. The City and other stakeholders preliminarily agreed to shift this alignment 55 feet to the south.

In a letter dated November 7, 2003 by the Ironwood village HOA Board of Directors and Pima Road Committee, a few other concerns were identified. These concerns were at the Downing Olson intersection. They wished to shift

Pima Road improvements as far to the west at this location, while saving bridge, and to shift Downing Olson alignment further to the north, basically centering it between properties.

CONCLUSION

Based on these changes and requests a new alignment was developed. This alignment incorporates all the noise mitigation and aesthetic buffering presented herein. This new alignment is shown on the attached drawing and is called **Alternative G, the Ultimate Plan alignment**. It maximizes the best features of both Alternatives A and C, incorporates the feedback from the stakeholders and results in the following additional benefits:

- Provides Noise mitigation through aesthetic sound walls and extensive buffering treatment that matches the Ironwood Village Landscape Plan
- Provides more equal buffering around Ironwood Village by shifting Union Hills south 55 feet
- Saves both of the existing bridges south of Downing Olsen
- Provides a dedicated right turn lane and an acceleration lane into and out of the Downing Olsen Intersection with realigned Pima Road.
- It acomodates Entry features at Union Hills and Downing Olsen
- It Minimizes right of way needed west of realigned Pima Road

Alignment G is recommended to be adopted by the City of Scottsdale and be constructed .

Ultimate Plan Alignment